

ABSTRACT OF THE DISCLOSURE

A semiconductor memory device is provided which is capable of correcting efficiently bits having a low error rate in a Pause Refresh Tail distribution and of greatly reducing a data holding current by lengthening a refresh period so that the refresh period exceeds a period for a Pause Refresh real power. The semiconductor memory device is made up of a 16-bit SDRAM (Synchronous Dynamic Random Access Memory) having a Hamming Code and including an ECC (Error Correcting Code) circuit made up of a encoding circuit being controlled by a first test signal to output by arithmetic operations a parity bit corresponding to an information bit, a decoding circuit being controlled by a second test signal to output an error location detecting signal indicating an error bit in bits of a codeword, and an error correcting circuit being controlled by a third test signal to input an error location detecting signal and to output an error bit in a reverse manner.